

TABLE A
MINIMUM RECOMMENDED DELINEATOR AND SIGN PLACEMENT

Table A-1
Taper Length Criteria for Temporary Traffic Control Zones

Type of Taper	Taper Length
Upstream Tapers	
Merging Taper	L MINIMUM
Shifting Taper	1/2 L Minimum
Shoulder Taper	1/3 L Minimum
Two-Way Traffic Taper	30 meters (100 feet) Maximum
Downstream Tapers	
(Use is optional)	30 meters (100 feet) Minimum

Formula for Taper Length 'L'

(For State Highways, see Traffic Control Systems in the Caltrans Standard Plans)

English	Metric *
$L = \frac{WS''}{60}$ (40 mph or less)	$L = \frac{WS''}{150}$ (65 km/h or less)
$L = WS$ (45 mph or greater)	$L = \frac{2}{3} WS$ (70 km/h or greater)
L = Taper Length in feet W = Width of Offset in feet S = Speed in mph	L = Taper Length in meters W = Width of Offset in meters S = Speed in km/h

* The metric formulas result in larger values due to the rounding of the constant in converting the English formula to the metric formula.

Table A-2
Suggested Advance Warning Sign Spacing

Road Type	Distance Between Signs in Meters (Feet)		
	A	B	C
Urban-40 km/h (25 mph) or less	60 (200)	60 (200)	60 (200)
Urban-50 km/h (30 mph) or more	100 (350)	100 (350)	100 (350)
Rural	150 (500)	150 (500)	150 (500)
Expressway/Freeway	300 (1000)	300 (1000)	300 (1000)

Note: These are suggested distances for Advance Warning Signs, adequate sign distances and proximity to other roadway features may dictate the need for adjustments when placed.

Table A-3
Taper Length, Buffer Space and Advance Warning Sign Spacing
Use in Typical Applications Diagrams

English Measurements

Length of Taper 'L' in Feet

Speed in Miles per Hour*	Width of Offset**	
	11 Feet	12 Feet
20	73	80
25	115	125
30	165	180
35	225	245
40	293	320
45	495	540
50	550	600
55	605	660
60	660	720
65	715	780
70	770	840

* Posted speed, off-peak 85th percentile speed prior to starting, or the anticipated operation speed.

** For other offset widths, apply the formula in table A-1.

Length of Longitudinal Buffer Space

Speed in Miles per Hour*	Length of Buffer Space in Feet
20	35
25	55
30	85
35	120
40	170
45	220
50	280
55	335
60	415
65	485
70	585

* Posted speed, off-peak 85th percentile speed prior to starting, or the anticipated operation speed.

Advance Warning Sign Spacing 'S'

Road Type	Distance Between Signs in Feet*
Urban-25mph or less	200
Urban-30mph or more	350
Rural	500
Expwy/Fwy	1000

* See Note.

Metric Measurements

Length of Taper 'L' in Meters

Speed in Kilometers per Hour*	Width of Offset**	
	3.3 Meters	3.6 Meters
30	20	22
40	35	38
50	55	60
60	79	86
70	154	168
80	176	192
90	198	246
100	220	240
110	242	264

Length of Longitudinal Buffer Space

Speed in Kilometers per Hour*	Length of Buffer Space in Kilometers
30	10
40	17
50	28
60	43
70	62
80	84
90	106
100	136
110	170

Advance Warning Sign Spacing 'S'

Road Type	Distance Between Signs in Feet*
Urban-40km/h or less	60
Urban-50km/h or more	100
Rural	150
Expwy/Fwy	300